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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,869

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Martin Israelsson

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EXAMINER

WOO, KUO-KONG

ART UNIT

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,869	Applicant(s) ISRAELSSON ET AL.	
	Examiner KUO WOO	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) filed on 9/21/09 has been considered.

Response to Amendment

2. This action is response to the communication filed on September 9, 2009.
3. Applicant's arguments with respect to claims 11-20 have been considered but they are not deemed to be persuasive. For examiners' response to the applicant's arguments or comments, see the detailed discussion in the remarks section.

Remarks

4. Applicant argued prior art reference Ohlsson in previous and the last office action without consideration being relevant reference. Examiner selected Hayashi as better reference and more explicitly same motivation and invention as explained later in detail. Back to Ohlsson argument, soft handover between Base Station Controller (RNC) using pilot signal dynamic offset threshold. ¶ 011, Determination is based on signal strength which must maintain its strength for **predestined trigger time** and certain **hysteresis** (time delay effect) value may be factor into the threshold expression. ¶ 20, another portion of the soft handover sequence (e.g., a remaining portion of the soft handover sequence) is initiated when the signal strength from the destination base station as received at the specified mobile station has a predetermined relationship to (e.g., exceeds) a fixed offset threshold. Ohlsson invention has same concept to describe the invention. However, Applicant argued in claim 11: a method for registration of draft Radio Network Controller (DRNC),... Support MBMS and defining a counter and a first

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threshold value; using the counter for counting of a set of power consuming event occurring at the DRNC node; and delaying registration of DRNC has exceeded the first threshold value. Hayashi provides explicitly motivation to employ his method (Abstract, MBMS service and moving destination RNC and source RNC). A UE associated with different RNC it is said to have drafted. Therefore the moving RNC acts as draft RNC as a switch routing information between the SRNC with associated with Core Network (CN) and UE. Hayashi discloses (§1011, when the number of UEs has reached a fixed value (**threshold value**) or more, in terms of **saving transmission power**, the RNC delivers the service data by the PtM system. Conversely, when the number of UEs has **fallen below the threshold value**, the RNC delivers the service data by the PtP system) wherein PtM and PtP as part of MBMS function. (§31, A PtP/PtM **judgment unit 42 has a function** for judging whether a delivery system for MBMS service data is set to a PtP system or a PtM system according to a counting value of the UE number counting unit 41). (§39, Thereafter, judgment on the PtP system and the PtM system is performed in the PtP/PtM judgment unit 42 in the RNC 5. Since this judgment depends upon the number of UEs, the number of UEs (a counted value of the UE number counting unit 41) and a threshold value are compared). (§40, if it is judged in step S17 that the number of UEs is equal to or more than the threshold value, the PtP system is switched to the PtM system in the RB setting unit 43 (step S19), and a message for setup of the RB (radio bearer) for the MBMS service is sent to the UE 20 (step S20). The reason to delay also discloses (§12, After the UE has joined the service of the MBMS (step S3 of FIG. 6), **there is a short time until the UE actually becomes capable of receiving the service data (step S7)**. During the time, movement of the UE between RNCs may occur.) In Figure 6, step S5 MBMS delaying notification (registration) for delivery of MBMS

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service data can be performed appropriately. Since Hayashi directly teaches the motivation for the improvement of DRNC and prevent any tendency of the DRNC notification too earlier,

5 Similarly, Claim 16, as noted in the previous office action and the important of switch work which related to threshold value and notification and timing to trigger the registrations. So claims 11, 16 and related depend claims stay rejected.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US-PGPUB 2004/0152453 A1) in view of Meago (US-PGPUB 2004/0223513 A1) and in further view of Ohlsson et al. (US-PGPUB 2002/0068571 A1).

Regarding claim 11, a method for registration of a drift Radio Network Controller (DRNC) said method comprising the steps of: Hayashi discloses “Defining a counter (¶30, unit 41 has a function for **counting the number of UEs** which exist in a zone of a cell under control of the RNC and receive an identical service) and a first threshold value” (¶40, step S17 that the number of UEs is equal to or more than the **threshold value**, the PtP system is switched to the PtM system in the RB setting unit 43 (step S19), wherein first threshold value is no MBMS session was set up in the system;

“Using the counter for counting of **a set of power consuming events** (§ 34, an "RNC ID" for specifying the **moving source RNC**, which receive the MBMS service, by "1") occurring at the drift **radio network control** node “(§34, a "UE ID" for specifying the **UE 20, and an "RNC ID"** for specifying the moving source RNC;

“Delaying registration (§39, a threshold value are compared. If the number of UEs is smaller than the threshold value ("Y" in step S17), the PtP system is maintained) and (§40, the number of UEs is equal to or more than the threshold value, the PtP system is switched to the PtM system in the RB setting unit 43 (step S19), and a message for setup of the RB (radio bearer) for the MBMS service is sent to the UE 20 (step S20) of the drift radio network control node with a core network node until the counter has exceeded the first threshold value” , wherein pending on the threshold level notification (**registration**) is delayed until threshold value reached.

Regarding claim 12, Hayashi discloses” wherein the events occurring at the drift network control node which is counted by the counter is a number (§ 40, the number of UEs is equal to or more than the threshold value, the PtP system is switched to the PtM system) of user equipment units for which a Iur linking procedure is performed for the MBMS session” wherein the PtM is MBMS session.

Regarding claim13, Hayashi discloses “wherein the of events occurring at the drift network control node which is counted by the counter”, However, Hayashi does not explicitly disclose “ the counter are time periods elapsed since an Iur linking procedure for the MBMS session has been performed for a predetermined user equipment unit”

In an analogous art, Meago discloses “the counter are time periods elapsed since an Iur linking procedure” (§15, the period of interest”, in a way that other RT services cannot access those resources) and (§46, counting this is the function that UTRAN performs when it wishes to identify the number of multicast subscribers in a particular cell, that wish to receive a multicast session for a particular service), and (§59, an MBMS programs is the MBMS service plan defining service availability times and expected characteristics of content, content delivery or data rates over time).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hayashi RNC teaching in invention of Meago provides method to overcome wasting time waiting and drawbacks of the prior art in delivering MBMS streaming service through a mobile radio network.

Rationales for arriving at a conclusion of obviousness suggested by the Supreme Court’s decision in KSR include: Applying a known technique to a known device ready for improvement to yield predictable results.

Regarding claim14, Hayashi discloses “Defining a second threshold value” (§39, If the number of UEs is smaller than the threshold value (“Y” in step S17), the PtP system is maintained, and service data is delivered through a dedicated channel for each UE) wherein second threshold value is small than Y in step S17;

“Delaying deregistration of the drift network control node until the counter has a value below the second threshold value.(§39, an “RB Setup” message is also sent to the UE 20 from the RB setting unit 43 of the RNC 5 such that the data is delivered by the PtP system (step S18), and (Since this judgment depends upon the number of UEs, the number of UEs (a counted value

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of the UE number counting unit 41) and a threshold value are compared) wherein until the second threshold value is reached the system will maintain current MBMS situation which means delaying deregistration (removal of link).

Regarding claim 15, Hayashi discloses “wherein the second value is selected”. However, Hayashi does not explicitly disclose “to provide hysteresis protection”

In an analogous art, Ohlsson discloses “to provide hysteresis protection” (¶ 11, a second event (Event 1B) is Radio Link Removal, which occurs when the measured and filtered pilot signal from the destination base station falls below the threshold of Expression) and (¶ 11, certain hysteresis value may be factored into the threshold expression) wherein hysteresis provides the protection of frequency of adding or removal of radio link to network.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Hayashi RNC teaching in invention of Ohlsson provides a positive verification result is a condition for proceeding with the handover sequence (see ¶ 15) to overcome often switching and drawbacks of the prior art in delivering MBMS streaming service through a mobile radio network.

Rationales for arriving at a conclusion of obviousness suggested by the Supreme Court’s decision in KSR include: Applying a known technique to a known device ready for improvement to yield predictable results

Regarding claim 16, has limitations similar to those treated in the above claim 11 rejection(s), and are met by the references as discussed above.

Regarding claim 17, has limitations similar to those treated in the above claim 12 rejection(s), and are met by the references as discussed above.

Regarding claim 18, has limitations similar to those treated in the above claim 13 rejection(s), and are met by the references as discussed above.

Regarding claim 19, has limitations similar to those treated in the above claim 14 rejection(s), and are met by the references as discussed above

Regarding claim 20, has limitations similar to those treated in the above claim 15 rejection(s), and are met by the references as discussed above.

Conclusion

8 **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KUO WOO whose telephone number is (571)270-7266. The examiner can normally be reached on Monday through Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KUO WOO/
Examiner, Art Unit 2617

/LESTER KINCAID/
Supervisory Patent Examiner, Art Unit 2617